NEW COMBINATIONS AND NOTES IN COMPOSITAE (VERNONIEAE, INULEAE S.L. AND HELIANTHEAE)

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Abstract

The following new combinations are proposed: *Distephanus plumosus* (O. Hoffm.) Mesfin, **comb. nov.** (Vernonieae), *Pseudognaphalium petitianum* (A. Rich.)Mesfin, **comb. nov.**, *Helichrysum forskahlii* (J.F. Gmel.) Hilliard & Burtt var. *compactum* (Vatke) Mesfin, **comb. nov.** and *Helichrysum formosissimum* (Sch.Bip.) A. Rich. var. *guilelmii* (Engl.) Mesfin, **comb. et stat.nov.** (Inuleae s.l.). New synonymies are provided in *Pulicaria* Gaertn. (Inuleae) and *Guizotia* (Heliantheae). A few selected specimens are also cited for some of the taxa mentioned.

Distephanus Cass. (Vernonieae)

The genus *Distephanus* was resurrected by Robinson and Kahn (1986) to accomodate those species from the islands in the western Indian Ocean and from East & Central Africa with yellow flowers and trinervate leaves that were, earlier on, kept in *Vernonia*. *Gongrothamnus* Steetz ex Peters which was reduced to synonymy under *Vernonia* (Brown 1909) was transferred and made a synonym under *Distephanus*. The following taxon was not studied by Robinson and Kahn (1986) and, as it was found to possess many of the characters of *Distephanus*, the transfer from *Gongrothamnus* is duly made here.

Distephanus plumosus (O. Hoffm.) Mesfin, **comb.nov.**

Basionym: *Gongrothamnus plumosus* O. Hoffm. in Engl. Bot. Jahrb. 38: 206 (1906), Fig. 4. Type: Ethiopia, Boran, Koron, May 1901, Ellenbeck 2244 (B†, syntype), Tarro Gumbi, April 1901, Ellenbeck 2070 (B†, syntype), 1350-1500m, Arussi-Galla, Webi Maua, March 1901, Ellenbeck 1989[a] (B†, syntype).

This is a woody shrub to 1.5 m high with brittle stems and branches. The leaves are slightly fleshy and distinctly 3-nerved from near the base. The flowers are bright orange to yellow. The pollen grains (Fig.1) are 33.9-38.8 µm in diameter and are ± similar to those described as 'type A' by Keeley and Jones (1979) and those given as Figures 3 and 4 by Robinson and Kahn (1986).

Distribution: Ethiopia, Somalia, Kenya.

Specimens: **Somalia**, 21 km N of Bardera on Garba Harre road, 14 June 1983, Gillett & Hemming 24744 (EA). **Ethiopia**, Sidamo, 67 km E of Filtu, 10 June 1986, Gilbert, Sebsebe & Vollesen 8116 (ETH, K), Petelin s.n. (ETH); on Filtu-Bokol Mayo road, 7 May 1987, Puff, Igersheim, Sebsebe & Ensermu 870507-2/9 (ETH). **Kenya**, Lag Ola, 23 May 1952, Gillett 13277 (K); Musi, 30 June 1951, Kirika 119 (K).

Pseudognaphalium Kirpichnikov (Inuleae)

A. Richard (1848) listed five names and Cufodontis (1966) seven under *Gnaphalium* L. In a revision of generic concepts in Gnaphaliinae, Hilliard & Burtt (1981: 202) provided the characters that differentiate *Pseudognaphalium* from *Gnaphalium* L. and *Helichrysum* Mill. and transferred four of the names in *Gnaphalium* to *Pseudognaphalium*. Two of the names in *Gnaphalium* were also transferred to *Helichrysum*. One name, *G. petitianum* A. Rich., remained, however, probably owing to the paucity of the available specimens. A. Richard (1848: 430) wrote that this taxon is different from the other species in having lanceolate and decurrent leaves and more numerous female florets. Recent collections (Sue et al. 70, and Mesfin 8436) confirmed the existence of this species in montane woodlands in Central and Northern Ethiopia. The female florets are 18-22 and the hermaphrodite florets 2-3.

Pseudognaphalium petitianum (A. Rich.) Mesfin, **comb.nov.**

Basionym: *Gnaphalium petitianum* A. Rich., Tent. Fl. Abyss. 1:429 (1848). Types: Ethiopia, Ouodgerate, Petit s.n. (P, syntype), between Mayegouagua and Debre Sina, Petit s.n. (P, syntype).

This species was listed as a synonym of *Helichrysum odoratissimum* by Cufodontis (1966), but has a different floret ratio.

Distribution: Known only from Ethiopia.

Specimens: **Ethiopia**, Choa, [= Shewa], 1862, Petit sn.n. (K); Shewa, Gorobela, 5 June 1982, Sue, Edwards & Class 70 (ETH); Tigray, 14 km on Maychew-Mekelle road, 20 Oct. 1991, Mesfin 8436 (ETH, K).

Helichrysum Mill. (Inuleae)

Hilliard & Burtt (1980) provided the correct name and the taxonomic position of *H. fruticosum* Vatke (1875). A variety recognized under this illegitimate name by Vatke (loc. cit.) is here transferred to its correct position.

H. forskahlii (J.F. Gmel.) Hilliard & Burtt (1980) var. ***compactum*** (Vatke) Mesfin, **comb. nov.**

Basionym: *H. fruticosum* Vatke var. *compactum* Vatke (1875). Type: Ethiopia, Mt. Gunna, 1863-8, Schimper 1426 (B† holo.; K! W! isotypes).

Distribution: Ethiopia, Kenya, Tanzania.

Selected specimens from **Ethiopia**: Gonder, Semien, Chenek, 25 Nov. 1952, Scott 284 (K); above Lori, 28 Nov. 1952, Scott 279 (K); Mt. Jesus Tabor, 22 March 1937, Pichi-Sermolli 981 (K); Gojam, Mt. Birhan, 21 August 1957, Evans & Hillier 579 (ETH, K); Shewa, Wechecha, 20 Nov. 1954, Mooney 6363 (K); nr. Addis Abeba, 1965, Wright in Mooney 6710 (K); Arsi, Mt. Borulucco, 2 Dec. 1965, W. de Wilde 9063 (ETH, K), 27 Nov. 1966, Gilbert 127 (ETH, K); Mt. Chilalo, 21 Dec. 1953, Mooney 5210 (ETH, K); Nov. 1926, Scott s.n. (K); 35 km E of Assela, 12 Jan. 1974, Ash 2338 (K); Bale, Tullu Deemtu, 13 Oct. 1988, Friis, Michelsen & Sebsebe 5500 (ETH, K); Nov. 1973, Hedberg 5614 (ETH, K); Rira, 20 Dec. 1959, Mooney 8347 (ETH, K); 5 Nov. 1971, Sue Gilbert 68 (ETH, K); 24 km on Goba-Dello Menna road, 6 Nov. 1988, Friis, Michelsen & Sebsebe 5745 (ETH, K); 31 km on Goba-Masslo road, 24 Oct. 1984, Friis, Gilbert & Vollesen 3402 (ETH, K); Harerge, Gara Mulletta, 24 Nov. 1962, Burger 2387 (K); Sidamo, Mt. Dello, 27 Jan. 1953, Gillett 14955 (K); 8 km SE of Wondo, 21 Oct. 1965, W.de Wilde 8366 (K); Mt. Damota, Nov. 1948, Scott 78 (K); Gamo Gofa, Doko valley, 1968, Mulvany 13 (K); Gughe Highlands, Mt. Tola, 15 Dec. 1948, Scott 143 (K).

Helichrysum formosissimum (Sch. Bip.) A. Rich.

In a note on the "*Helichrysum formosissimum* group" in the Afroalpine flora of tropical Africa, Hedberg (1957:347-348) wrote that "... the 10 species described in this group have been reduced to 2 taxa, *Helichrysum formosissimum* and *H. guilelmii*" and also stated that "... although they are treated here as distinct species it might perhaps be equally justifiable to reduce them to subspecies."

While studying the Ethiopian material of *H. formosissimum*, a few specimens that shared the stem and foliar features of those in East Africa and known as *H. guilelmii* Engl. were encountered. All available material from the entire range of distribution of the "group" was later studied. Particular attention was paid to leaf size, shape, pubescence and stem height and pubescence. The variation in these features was found to be continuous both along altitudinal and latitudinal gradients. A few specimens with the characteristic features of *H. guilelmii* (e.g., Mooney 8346, Bale, above Rira, 3800 m, on steep much burnt and grazed slope in *Erica* scrub, c. 20-30 cm high; Friis, Michelsen & Sebsebe 5698, Bale, 3-4 km N of Rira, 3300 m, to 1.5 m high) in the same general area as those with the characters of *H. formosissimum* (e.g., Mooney 8363, Bale, Rira, 3260 m, in marshy ground, 1.5 m high; Friis, Gilbert & Vollesen 3625, Bale, 58 km on Dello Menna-Goba road, 3300 m; Hedberg 5573, Bale, nr. Garba Guracha, 3950 m) were encountered.

The distinguishing features between *H. formosissimum* (leaves scabrid with numerous stiff and glandular hairs, sometimes also thinly arachnoid) and *H. guilelmii* (leaves thinly arachnoid sometimes with few glandular hairs above, densely woolly tomentose beneath) are too few and trivial to warrant their recognition as separate species. Hence, *H. guilelmii* is reduced to a variety of *H. formosissimum.*

H. formosissimum (Sch. Bip.) A. Rich. var. ***guilelmii*** (Engl.) Mesfin, **comb. et stat. nov.**

Basionym: *H. guilelmii* Engl. (1892). Type: Tanzania, Kilimanjaro, above Kilosho, Volkens 1556 (K, lectotype, selected by Hedberg 1957: 215).

Distribution: Ethiopia, Uganda, Kenya, Tanzania.

Selected specimens. **Ethiopia**: Bale, 4 Nov. 1988, Friis, Michelsen & Sebsebe Demissew 5689 (ETH, K); 19 Dec. 1959, Mooney 8346 (K), 30 Oct. 1973, Hedberg 5573 (ETH, K); 29 Dec. 1989, Mesfin Tadesse 7782 (ETH), 26-28 Dec. 1990, Mesfin T., Lisanweork & Berhanu 8128 and 8149 (ETH); Arsi, 1975, Thomerson 551 (ETH); Gamo Gofa, 23 Dec. 1948, Scott 162 and 148 (K). **Tanzania**, 9 Nov. 1968, Bigger 2302 (ETH, K). **Uganda**, 14 Nov. 1961, Kerfoot 1172 (K). **Kenya**, 23 Dec. 1970, Tweedie 2346 (K).

Pulicaria Gaertn. (Inuleae)

In a review of the Inuleae for the Flora of China, Ling (1965) placed *Vicoa* Cass. (1829) in the synonymy of *Pentanema* Cass. (1818) and gave *V. auriculata* Cass. as a synonym of *Pentanema indicum* (L.) Ling. Oliver and Hiern (1877) described *V. divaricata* Oliv. & Hiern from specimens collected in northern Ethiopia. Examination of the holotype of *V. divaricata* revealed that it rather belongs to *Pulicaria* Gaertn. In the revision of the genus *Pulicaria* by E. Gamal-Eldin (1981) its correct systematic position was not pointed out, although the isotype of *V. divaricata* (from W) is cited under *P. petiolaris* Jaub. & Sp. (Gamal-Eldin 1981: 186) in the list of specimens studied from Ethiopia.

P. petiolaris Jaub. & Sp., Ill. Pl. Orient. 4: 69, tab. 344 (1852). Type: Arabia, Yemen, Botta s.n. (P, holo.)

Syn.: *Vicoa divaricata* Oliv. & Hiern, Fl. Trop. Afr. 3: 362 (1877), **syn. nov.** Type: Ethiopia, Eritrea, Ailet, 1820-1826, Ehrenberg s.n. (K, holo.!; W iso. n.v.).

Distribution: Egypt, Sudan, Ethiopia, Djibouti, Somalia, Saudi Arabia, Yemen.

Guizotia Cass. (Heliantheae)

Guizotia scabra (Vis.) Chiov.

Siegesbeckia somalensis S. Moore, J. Linn. Soc. Bot. 35: 342 (1902), **syn. nov.** Type: Somalia, Sheik Mahomet, 30 Oct. 1894, Donaldson-Smith 226 (BM, holo.!).

The shape of the corolla and cypsela and their pubescence in the holotype is that of *Guizotia* and not *Siegesbeckia*. The holotype of *S. somalensis* is referable to *G. scabra* subsp. *schimperi* (Sch. Bip.) J. Baagoe but since cytogenetic studies are currently underway on the genus (Kifle Dagne, University of Lund & Addis Abeba University, personal communication), the infraspecific placement of the taxon is deferred until a later time.

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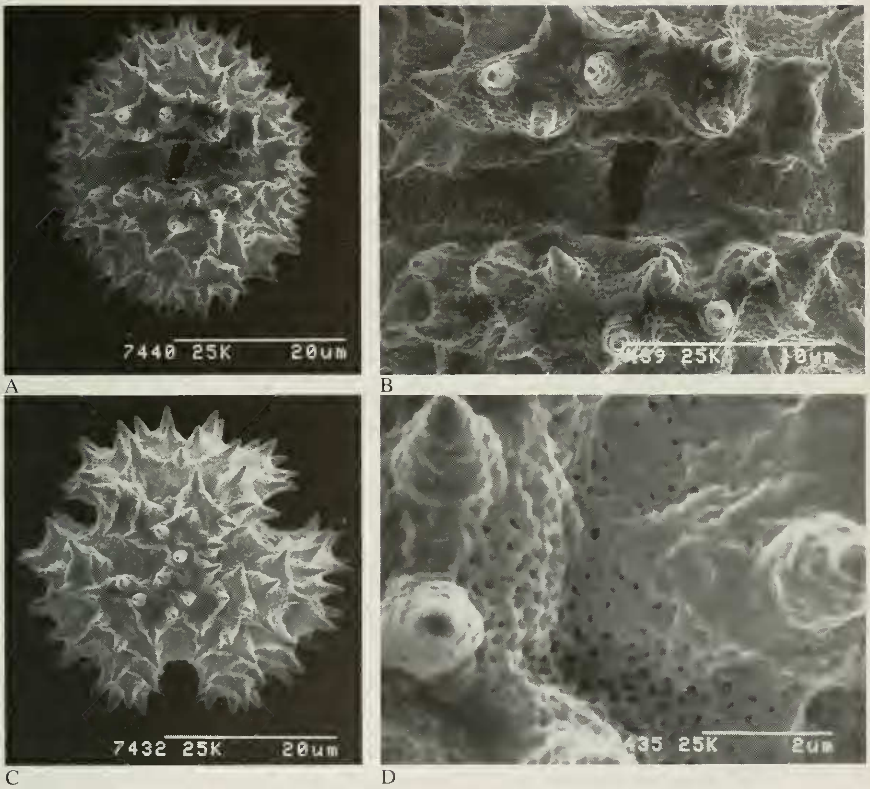
Fig. 1. Scanning electron micrographs of pollen grains of *Distephanus plumosus*. A-B: Apertural view. C: Polar view. D: Tectum perforation and spine bases.


7440 25K 20um
A
39 25K 0um
B
7432 25K 20um
C
35 25K 2um
D